Local Programs Procedures

LPP 97-04
Hazard Elimination Safety (HES) Revision and Interim Deadlines

Replace: *Local Assistance Program Guidelines*, Chapter 9, "Hazard Elimination Safety (HES)"

Reference: LPP 95-07, Reengineering

Effective Date: July 9, 1997

Approved: _____
ALAN P. GLEN
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Design and Local Programs

The purpose of this Local Program Procedure (LPP) is to revise the *Local Assistance Program Guidelines*, Chapter 9, "Hazard Elimination Safety (HES)", and to set interim deadlines for the 1997/98 HES Program.

EXISTING PROCEDURES

The *Local Assistance Program Guidelines* was issued July 1, 1996. This manual included existing operating procedures and guidelines for the HES Program.

NEW PROCEDURES

Local Assistance Program Guidelines

Please refer to the attached revised HES Program, Chapter 9 of the *Local Assistance Program Guidelines.* The revisions are necessary in order to accomplish the following objectives.

1. Establish a multi-year program, that is updated annually, on a schedule that meets the needs of the regional agencies and Metropolitan Planning Organizations (MPOs) in building their Regional and Federal Statewide Transportation Improvement Programs (RTIP and FSTIP).

2. Ensure that the most cost effective projects are being selected and that the

objectives of the HES Program, as defined in federal law, are being met.

3. Implement a structured process to approve or disapprove cost changes and changes in the scheduling of projects to encourage timely use of funds.

These guidelines incorporate comments from the HES Advisory Committee consisting of representatives from Caltrans, cities, counties and the Federal Highway Administration.

The attached revised Chapter 9 makes reference to the *Local Assistance Procedures Manual*, which has not yet been published. In the interim, please refer to the appropriate LPP.

Interim Deadlines

This year while local agencies transition into the multi-year plan, interim deadlines are provided and discussed below. Next year local agencies will need to meet the operating procedures and guidelines for the HES Program without special transition deadlines.

The schedule for the program this year includes the following changes to the timetable shown on page 9-7 of the revised guidelines. The deadline for local agencies to submit a list of project nominations to the Caltrans District Local Area Engineer is September 2, 1997. The district review of the local agencies' nominations and the forwarding of the recommended list to headquarters will occur between the dates of September 2, 1997, and September 15, 1997. The Caltrans Headquarters, Office of Local Programs (OLP), will issue the three-year plan by October 1, 1997. Beginning next year, the schedule as stated in the final guidelines will be adhered to.

The final HES operating procedures and guidelines state the following:

"Local agencies are required to provide an update of project schedules and costs on January 1 and July 1 of each year for all projects in the three-year program that have not been awarded. Local agencies that fail to provide these semi-annual updates on schedules and costs will have their projects dropped from the program. The updates will include the following information, as necessary (See Exhibit 9-E):

- An update on the cost, if the cost has been changed.
- An update of the expected award dates.
- Identification of projects that can be advanced.

If projects are delayed, and other projects can be delivered early, preference will be given to advancing projects in the same local agency or MPO where the project delay occurred.

If a project is delayed and another project can be advanced, preference will be given in the following order:

1. To the same local agency administering the delayed project;

2. To a project administered by a local agency associated with the same MPO as that of the local agency whose project is delayed;

3. To another local agency associated with a different MPO."

This year's updates of project schedules and costs for each of their projects included in the multi-year plan will be required by September 2, 1997 (at the time of submittal of candidate projects for the three-year plan), and January 1, 1998. Since the intent of the multi-year program is to move to a project delivery programming system, flexibility will be given this year to program projects in the year that project will be delivered without penalty of time deadline requirements established in previous HES operating procedures and guidelines. Consequently, projects in the previous two-year plan that will not be awarded by September 30, 1997, may be reprogrammed in the new three-year plan.

Beginning with the schedules to be established on September 2, 1997, all projects in the multi-year program should be scheduled to have environmental clearance, right of way certified, construction funds obligated and construction contracts awarded by September 30 of the year programmed in the multi-year plan, unless a specific extension is requested by the local agency and approved by OLP. If a construction contract is not awarded by September 30 of the year programmed, and an extension is not requested and approved, the project will be dropped from the program and the local agency must reimburse Caltrans for any federal or state funds received. Dropped projects may be submitted for reconsideration in subsequent years.

Attachment

CHAPTER 9 HAZARD ELIMINATION SAFETY (HES)

CONTENTS

EXHIBITS

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CHAPTER 9 HAZARD ELIMINATION SAFETY (HES)

9.1 INTRODUCTION

Following passage the Highway Safety Act of 1966, the Federal Highway Administration adopted the American Association of State Highway and Transportation Officials (AASHTO) publication "A Policy on Geometric Design of Highways and Streets," (referred to as the AASHTO Green Book), as well as other safety related design and operational procedures. The Surface Transportation Assistance Act of 1982 created the Hazard Elimination Safety (HES) Program by combining several existing safety programs.

The HES Program provides funds for safety improvements on all public roads and highways, except the Interstate System. These funds serve to eliminate or reduce the number and severity of traffic accidents at hazardous highway locations, sections, and elements.

Section 152 (a) of Title 23 of the United States Code (U.S.C.) cites the Federal requirements for the HES Program.

> "Each state shall conduct and systematically maintain an engineering survey of all public roads to identify hazardous locations, sections and elements, including roadside obstacles and unmarked or poorly marked roads, which may constitute a danger to motorists and pedestrians, assign priorities for the correction of such locations, section, and elements, and establish and implement a schedule of projects for their improvement."

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 requires that 10 percent of the apportioned Surface Transportation Program (STP) funds be made available for safety programs as defined by Sections 130 - Rail-Highway Crossing Program (See Chapter 10, "Rail At-Grade Crossing", in this manual) and 152 (HES) of Title 23 of the United States Code.

Section 2333 of the Streets and Highway Code establishes the Legislature's intent that the total statewide safety funds be split equally between State highway projects and the local transportation projects. Therefore, separate priority lists are established for the State and local HES programs. This chapter describes the local HES program.

9.2 PROJECT ELIGIBILITY

For projects to be eligible for HES funds, a specific safety problem must be identified for correction and the project must correct or substantially improve the condition. In addition, the completed local Federal assistance project must provide for, or consider, the upgrading of related safety features to the appropriate standards.

Local safety projects financed with HES funds may be located on any road functionally classified as "local road or rural minor collector" or higher.

Local agencies should determine the safety problem based on accident data or potential for accidents. The proposed project must solve that safety problem to the greatest extent possible. For example, placing guard rail will not correct an inadequate sight

distance problem and a signalization project may not correct a safety problem because it has a high safety index.

The finished project must correct a safety problem with consideration given to meeting Federal guidelines for safety features such as signing and striping or other roadway appurtenances.

Proposed projects should implement a "quick fix" and not require more than minor right of way or create potential environmental problems. Federal funds are limited and there are time constraints.

9.3 PROJECT CATEGORIES

Projects eligible for HES funding are prioritized in two categories.

The first category is for those projects qualifying for HES funds based on a calculated Safety Index. The second category is for those projects qualifying based on Work Type priority (defined below). Safety Index projects receive approximately 25 percent of available HES funds, whereas Work Type priority projects receive approximately 75 percent.

SAFETY INDEX

Projects may qualify for HES funding based on a calculated Safety Index (SI). A Safety Index Calculation Sheet (Exhibit 9-A) must be completed for each project.

Instructions for calculating the project Safety Index are included in Exhibit 9-B. Exhibit 9-C lists the anticipated service life for various improvement types and accident reduction factors for use in calculating the Safety Index.

The "Accident Cost" column includes separate costs for urban and rural areas. Projects within city limits are considered urban; all others are rural. Use the appropriate costs for the combined "Fatal and Injury" accidents as indicated in column "E" of the Safety Index Calculation Sheet.

The applicant calculates the Safety Index by using accidents directly related to the correction proposed by the project or using all the accidents at the location and applying a Reduction Factor. Projects are then prioritized statewide by descending safety indexes.

WORK TYPE IMPROVEMENTS

A Work Type category is used to fund projects with safety needs that cannot be quantified by a Safety Index due to the lack of sufficient accident data. For work type improvements, the Work Type Improvement Sheet (Exhibit 9-D) must be completed. Although the computation of a "Safety Index" may not be practical, those projects with some accident data may be given higher priority within the work type categories.

Work Types are based on a FHWA Annual Safety Report which rates work type categories by a nationwide benefit/cost ratio. The following are the current eligible work type priorities based on an evaluation of highway safety improvements by benefit/cost ratios:

1. Roadway Illumination
2. Relocated or Breakaway Utility Poles
3. Traffic Signs
4. Upgrade Median Barrier
5. Remove Obstacles
6. New Traffic Signals
7. New Median Barrier
8. Upgrade Guardrail *
9. Impact Attenuators
10. Upgrade Traffic Signals

* Includes blunt nose sections.

The priority and work type categories vary by cycle depending on the previous years FHWA Annual Safety Report.

The OLP also administers a Barrier Rail Replacement Program including approach guardrail, (see Chapter 6 "HBRR" in this manual) utilizing Bridge Replacement and Rehabilitation (HBRR) funds. Therefore, this type of project is not included for HES funding.

Many of the work type categories are broad in nature, so some clarification may be needed to determine if a project qualifies under a certain work type. Consult with the DLAE or Office of Local Programs when clarification is necessary.

Since funds are limited, local agencies should consider proposing projects from the higher priority work types and limiting the number of projects for each work type. Work type categories are funded in decreasing percentages, based on priority, with the intent of funding a portion of as many work types as possible.

Only the highest ranked projects on the statewide priority list(s) will be considered for Federal funding. Concerns regarding project funding eligibility may be addressed during the project field review (when requested by the local agency).

9.4 HES FUNDING CONSIDERATIONS

Eligible project related costs include preliminary engineering, construction engineering, and construction. Very minor right of way and environmental costs may also be eligible for HES funding.

The maximum total project cost, provided that funds are available, is $500,000. Eligible HES project costs are limited to the amount shown on the approved three-year HES Program. Requests for increases over the amounts in the approved program will not be granted after the contract is awarded, except in unusual circumstances and subject to availability of funds.

The local agency's share of cooperative local agency/State projects (where each agency is responsible for their cost) is based on legs of an intersection, etc. The local agency's share should be identified in the application. Federal funding of the State share is subject to inclusion of the project on the State HES Program list. Conversely, State programmed cooperative projects cannot use local HES funds unless the local share is identified in the local HES Program. Funding levels are established as per agreement with the Caltrans Federal Resources Office of Budgets.

Federal funds are considered "allocated" to each project phase when the OLP Area Engineer authorizes the work through the FHWA delegated authorization process (See Chapter 3, "Authorization" in the *Local Assistance Procedures Manual*). These funds are reserved for the project, but the local agency will not be reimbursed for any phase

until after the contract award. The OLP Area Engineer, upon receiving the contract award data (bid summary, finance letter) and subject to an executed supplemental agreement, processes the documentation (expenditure authorization and commitment of HES funds) to allow the reimbursement of local agency invoices.

The project reimbursement ratio is determined at the time of the "Authorization to Proceed" regardless of the Federal funds shown on the HES program. The standard reimbursement ratio for STP Safety funds is 90 percent. However, the 1991 ISTEA does allow certain types of safety improvements to be reimbursed 100 percent. In accordance with 23 U.S.C. Section 120(c) the following types of work are 100 percent Federally funded:

- traffic control signalization
- traffic lights
- impact attenuators
- pavement markings
- priority control systems for emergency vehicles at signalized intersections
- traffic signs
- guardrail
- concrete barrier end treatments
- breakaway utility poles

9.5 DEVELOPMENT OF THREE-YEAR PLAN

Under ISTEA, the local HES Program receives approximately $9 million per year. A three-year program of projects, coinciding with the development of the Federal State Transportation Improvement Program is developed each year. In order to synchronize with the programming of the Federal STIP, HES is managed through a three-year program that is updated annually.

Safety Index and Work Type projects that are included in the three-year program are Federally funded on a first come/first serve basis in the year they are assigned in the program. Projects may be advanced if other projects are delayed.

Every year, the Office of Local Programs requests the District Local Assistance Engineers to solicit local agencies for candidate HES projects for inclusion in the three-year program. The following is the procedure and schedule for development of the plan:

April 1	Issue instructions to local agencies and solicit candidate "Safety Index" and "Work Type" projects.
June 1	Local agencies submit list of project nominations to DLAE
June 1-15	District reviews local agencies' nominations and forwards a recommended list to headquarters.
July 1	Caltrans Headquarters Office of Local Programs issues the three-year plan.

LOCAL AGENCY SUBMITTALS

Local agencies submit applications for projects by completing either a Safety Index calculation or a Work Type Improvement description, according to the forms and instructions in appendices 9-A through 9-D.

Proposed projects must include an estimated date of award so the project can be appropriately scheduled in the three-year program.

DISTRICT REVIEW

It is the DLAE's responsibility to review Safety Index calculations to ensure that the data and factors are appropriate. The accidents used to calculate the safety index must be related to the proposed correction or the reduction factor used.

If all accidents at the location are used to calculate the Safety Index, the reduction factor(s)must be used. Any required corrections are to be made and the district reviewer must initial the appropriate box in the "Safety Index Calculation Sheet".

The Work Type information must be reviewed for completeness.

Two separate lists of projects must be submitted: one list for projects rated by "safety index" and a second list for projects to be assigned a priority number based on work type.

Each District should prioritize the work type projects within each work type and specify the basis, by project, for determining the project priority. The prioritizing process should emphasize accidents, traffic volume and speeds, especially fatal accidents and speeds in excess of seventy (70) kilometers per hour. This prioritizing assists the OLP in developing a statewide priority for each work type. DLAE should indicate their recommended highest priority project for each agency.

Submit the lists to the OLP with the following information for each project:

- agency name
- project number
- safety index calculation or work type information, as appropriate
- functional classification of route
- type of work
- Federal funds
- total project cost
- estimated award date

Photographs are also required for all projects. Collision diagrams for Safety Index projects and Work Type projects should be submitted when available.

HEADQUARTERS OFFICE OF LOCAL PROGRAMS APPROVAL

The Office of Local Programs develops a revised three-year program of HES projects, including both the Safety Index and Work Type projects based on available funding, district review, and commitments made for projects in the previous three-year plan. Eligible projects are funded on a first come/first serve basis in the year scheduled in the program.

9.6 PROJECT STATUS REPORTS

Local agencies are required to provide an update of project schedules and costs on January 1 and July 1 of each year for all projects in the three-year program that have

not been awarded. Local agencies that fail to provide these semi-annual updates on schedules and costs will have their projects dropped from the program. The updates will include the following information, as necessary (See Exhibit 9-E):

- An update on the cost, if the cost has been changed.
- An update of the expected award dates.
- Identification of projects that can be advanced.

If projects are delayed, and other projects can be delivered early, preference will be given to advancing projects in the same local agency or MPO where the project delay occurred.

If a project is delayed and another project can be advanced, preference will be given in the following order:

1. To the same local agency administering the delayed project.

2. To a project administered by a local agency associated with the same MPO as that of the local agency whose project is delayed.

3. To another local agency associated with a different MPO.

9.7 PROJECT IMPLEMENTATION

LPP 96-02 Design Standards for Non-NHS Projects, describes statewide design standards, specifications, procedures, guides and references that are acceptable for application in the geometric, drainage and structural design of local assistance projects. The LPP also describes design exception approval procedures. These standards and procedures shall be used in the design of HES projects off the National Highway System (NHS).

Projects are processed in accordance with project implementation procedures outlined in the Local Program Procedure (LPP) 95-07, Reengineering; LPP 96-02, Design Standards for Non-NHS projects; LPP 96-03, Local Quality Assurance Program and subsequent LPPs. (Note: When the new *Local Assistance Procedures Manual* is issued, it will replace these project implementation procedures.) The local agency will certify that they have complied with all state and federal procedures consistent with the project implementation procedures, including these HES Program Guidelines.

The OLP Area Engineer typically authorizes the project phases and processes the request for fund obligation to the FHWA. The District Local Assistance Engineers should provide the local agency with the written authorization to proceed with each phase.

9.8 APPROPRIATION CODES

There are four Federal appropriation codes available for HES projects:

- STPLH* Hazard Elimination @ 90% - 33P
- STPLHG* Hazard Elimination @ 100% - 33Z
- STPLH Safety (Optional) @ 90% - 33A
- STPLHG Safety (Optional) @ 100% - 33Q

*use these codes unless otherwise instructed by OLP Area Engineer.

9.9 DEADLINES

It is the intent of the HES Program that Federal funds be expended as soon as possible for eligible safety projects that can be designed and constructed in a short time frame. Projects must be awarded and construction funds must be obligated by September 30 of the same year in which they are programmed, unless an extension has been approved by OLP. Projects that cannot meet delivery deadlines as established in the three-year program are allowed a maximum of one extension for a maximum of one year, subject to prior written approval by OLP. After receiving an extension, a then-undeliverable project will be required to recompete. This restriction will not apply if Caltrans is responsible for accelerating the programming of the project.

9.10 EVALUATION

Federal directives require that the results of Safety Improvements be evaluated three years after the project is completed. Each project listed must have a before-and-after evaluation. Safety deficiencies corrected by this program largely justifies the prioritizing methods and future funding. A sample Project Evaluation form is included as Exhibit 9-E.

9.11 REFERENCES

Title 23, U.S.C., Subpart A, Chapter 1, Section 152
Title 23, U.S.C., Section 120(c)
Street and Highways Code, Sections 2330-2334

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SAFETY INDEX CALCULATION

CITY/COUNTY OF _____ DATE _____
CALCULATED BY _____
CHECKED BY _____

PROJECT LOCATION _____

PROPOSED IMPROVEMENT _____

PROJECT PURPOSE _____

TOTAL COST (in $1000s) _____ ADT (existing, all directions, in 1000s) _____

NUMBER OF LOCATIONS, OR LENGTH IN MILES _____

PROPOSED AWARD DATE: _____

SEVERITY OF ACCIDENTS	COLUMN							
	A	**B**	**C**	**D**	**E**		**F**	**G**
	TOTAL ACCIDENTS LAST THREE (3) YEARS	AVERAGE NO. OF ACCIDENTS PER YEAR	REDUCTION FACTOR	ACCIDENTS REDUCED	ACCIDENT COSTS ($1,000's)		LIFE OF IMPROVE-MENT	SAVINGS IN ACCIDENT COSTS ($1,000's)
		A ÷ 3	**(RF) ****	**B x C**	**urban**	**rural**	******	**D x E x F**
FATAL + INJURY					**24.0**	**61.0**		
PDO					**3.2**			
TOTALS								

INITIAL ACCIDENT RATE

IAR = $\frac{\text{"B"}}{\text{ADT x 0.365 x N*}}$ =_____

SAFETY INDEX

SI = $\frac{\text{"G" (x 100)}}{\text{Total Improvement Cost}}$ =_____

EXPECTED ACCIDENT RATE

EAR = $\frac{\text{"B" - "D"}}{\text{ADT x 0.365 x N*}}$ =_____

If EAR < ABR**, Calculate Adjusted Safety Index

REDUCED REDUCTION FACTOR

RRF = "C" x $(EAR/ABR)^3$ =_____

ADJUSTED SAFETY INDEX

ASI = $\frac{RRF}{\text{"C"}}$ x **SI** =_____

* Number of locations, or if other than spot locations, use length in miles w/ minimum length of one mile

** From Exhibit 9-C

District Check by: _____ Date: _____

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INSTRUCTIONS
SAFETY INDEX CALCULATIONS

City/County: Strike out the inappropriate word and add the name of your agency.

Project Location: Show the main roadway and the cross street involved or the distance (to the closest 0.1 mile) to the nearest intersecting roadway.

Proposed Improvements: There may be more than one type of improvement contemplated; such as signals and channelization. All types of improvements for a given project should be listed.

Project Purpose: The purpose of the project is the reason (s) for which it is implemented. It depends on the specific safety deficiencies identified at the project site, as documented in collision diagrams, accident histories, project planning reports, project justification statements, and other sources.

Some possible project purposes are to reduce:

running off the road	head-on collisions
skidding	sideswipes
hitting fixed objects	night accidents
rear-end collisions	hazardous maneuvers

Total Cost: All costs should be added; i.e., right of way, utility relocation, contributions by others, preliminary engineering, project construction, construction engineering, project administration, etc.

Accidents: Only reported accidents are used since the accident costs have been adjusted to reflect unreported accidents. The total number of all types of accidents is used in calculating the Accident Rate. ***Accident history should reflect three years of data.***

Reduction Factor Combinations: The reduction factors shown in Exhibit 14-C should be adjusted if either of the following conditions exist:

1. The project is for more than one type of improvement.

   Example: A project consists of constructing left-turn painted channelization at an unsignalized intersection (35 percent reduction from Exhibit 14-C), and installation of new safety lighting where none now exists (15 percent reduction of night accidents). If there were an average of 20 accidents/year, with 12 at night, then the calculation of the combined reduction factor is:

   Lighting: (12 night acc) x 15% = 1.8 acc. reduced

   Channelization: (20 total acc) - 1.8 acc. = 18.2 x 35% = 6.4 acc. reduced

   Combined: 1.8 = 6.4 = 8.2 total accidents reduced
   8.2 ÷ 20 = 41% combined reduction factor

2. Accident rate check shows it to be too low.

   Calculate your Expected Accident Rate (EAR) and check this against the Accident Base Rate (ABR) shown in Exhibit 14-C. If your EAR is lower than the ABR, the reduction factor listed in Exhibit 14-C is not appropriate and must be reduced.

Example:

$$EAR = \frac{\text{20 acc/yr (total) - 8.2 acc/yr (reduced)}}{\text{30 (ADT in thousands) x 0.365}}$$

$$= \frac{\text{11.8 acc/yr (after)}}{\text{10.95}} = 1.08 \text{ acc/MV}$$

Since the Expected Accident Rate after the improvement is greater than the Accident Base Rate (0.80 from Exhibit 14-C) for either type of improvement, it is correct to use the calculated Reduction Factor (RF). But, had the EAR calculated out to be 0.60, then a Reduced Reduction Factor (RRF) would have to be figured as follows:

$$RRF = 0.41 (RF^*) \times \left| \frac{0.60 \text{ (EAR)}}{0.80 \text{ (ABR)}} \right|^3 = 0.17$$

The RRF would then be used to calculate an Adjusted Safety Index.

Life of Improvements, Combined: The life of a standard combined project should be computed by the weighted average (using construction costs) of the different improvements. From the example above:

Cost and expected life of lighting..	$6,000.	15 years
Cost and expected life painted channel	$2,000	10 years
Total Cost.	$8,000	

$$\frac{\text{\$6,000 (lighting)}}{\text{\$8,000 (total)}} = 0.75 \times 15 \text{ yrs} = 11.25 \text{ yrs life}$$

$$\frac{\text{\$2,000 (channel)}}{\text{\$8,000 (total)}} = 0.25 \times 10 \text{ yrs} = 2.50 \text{ yrs life}$$

Life of combined projects.....13.75 yrs

* Reduction factor calculated from the example in 1.

CALCULATION FACTORS FOR HIGHWAY SAFETY PROJECTS

TYPE OF IMPROVEMENT	REDUCTION FACTOR (RF)	ACCIDENT BASE RATE (ABR)
A. New signals (w/ or w/o channelization and/or lighting.	15% of all accidents	1.20
B. Modify signals to reduce accidents (w/ or w/o interconnection)	15% of all accidents	1.20
C. Two-way left-turn lane	25% of all accidents	1.00
D. New left -turn land		
1. At signalized intersection		
a. With no left-turn phase	15% of all accidents	1.00
b. With left-turn phase	35% of all accidents	1.00
2. At non-signalized intersection	35% of all accidents	0.80
E. New safety lighting (where no lighting exists)	15% of all night accidents	0.80
F. Upgrade traffic signs	5% of all accidents	1.00
G. Upgrade pavement markings	5% of all accidents	1.00
H. Improve pavement texture	10% of all accidents	1.00
I. Signing		
1. Curve warning arrows	20% of all accidents	0.50
2. Advance curve warning with advisory speed	20% of all accidents	0.50
3. 4-way stop	50% of all accidents	0.50
J. Curve correction or superelevation	50% of all accidents	1.00
K. Realignment	50% of all accidents	1.00
L. Reconstruction (combinations & miscellaneous)	20% of all accidents	1.00

LIFE OF IMPROVEMENT (IN YEARS)

INTERSECTION AND TRAFFIC CONTROL

Construct Turning Lanes	10	Install Delineators	2
Provide Traffic Channelization	10	Install Illumination	15
Improve Sight Distance	10	Upgrade Traffic Signals	10
Install Traffic Signs	6	Install New Traffic Signals	10
Install Pavement Marking	2		

ROADWAY AND ROADSIDE

Widen Travel-Way (no new lanes)	20	Relocate Utility Poles	10
Add Lane(s) to Travel-Way	20	Install Guardrail End Treatment	10
Construct Median for Traffic Separation	20	Upgrade Guardrail	10
Widen or Improve Shoulder	20	Upgrade Median Border	15
Realign Roadway (except at railroad crossings)	10	Install New Median Barrier	15
Overlay for Skid Treatment	10	Install Impact Attenuators	10
Groove Pavement for Skid Treatment	10	Flatten or Re-grade Side Slopes	20
Install Breakaway Sign Supports	10	Remove Obstacles	20
Install Breakaway Utility Poles	10	Install Bridge Approach Guard Rail Transition	10

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HES WORK TYPE IMPROVEMENT

Work Type Category: _____

Applicant: City or County of: _____

Project Location: (attach location map) _____

_____

Describe Safety Problem to be Corrected: _____

_____

_____

Describe Proposed Improvement: _____

_____

_____

Project Cost ($1,000)

Construction	**$**	_____
Preliminary Engineering	**$**	_____
Construction Engineering	**$**	_____
Totals	**$**	_____

Number or Accidents (last 3 years)		**ADT**	**Posted Speed Limit**
Fatal	_____	**Major Direction** _____	_____
Injury	_____	**Minor Direction** _____	_____
PDO	_____		

Was Project Selection Based on a Safety Management System? Yes or No

If not, explain how the project was chosen: _____

_____

Proposed Award Date: _____

Is Right of Way Acquisition Required? Yes or No

Are Any Environmental Problems Anticipated? Yes or No.

Prepared By: _____
Telephone: _____

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PROJECT STATUS REPORT

(For projects not yet awarded)

Date: _____

City or County of _____

Project Number: _____

Description of Project _____

_____

_____

_____

Award Date (actual or projected) _____

Proposed projects must include an estimated date of award so the project can be appropriately scheduled in the three-year program.

Has this date changed from date shown on application? YES NO

If "YES," explain reason for delay: _____

_____

_____

Original Cost Estimate: ***$*** _____

Cost Estimate as of this Report: ***$*** _____

Reason for difference (increase OR decrease): _____

_____

_____

Other comments: _____

_____

_____

_____

Prepared By: _____

Telephone: _____

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PROJECT EVALUATION

Agency _____ **Project No. HES** _____

Project Location:

Type of Work:

Accident Data	**Fatal Injury**	**Property Damage Only**	**ADT**
Before: Total last 3 yrs.			
After: Total last 2 yrs.			

PHOTOGRAPHS

PHOTOGRAPHS

PHOTOGRAPHS

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